Number 5

Autoclave Testing

Much emphasis is placed on the importance of autoclave testing. This is because routine performance tests are the most reliable way of ensuring an autoclave is functioning correctly.

The requirements for autoclave testing are identified in a number of documents published by the Medicines and Healthcare Products Regulatory Agency (MHRA), along with Healthcare Technical Memoranda (HTM) 2010. Not all establishments, however, are required to follow this regime. If you are in doubt or need guidance on which guidelines you should follow please refer to your local Infection Control Nurse, their details will be available from the Primary Care Trust for your area.

All autoclave testing is periodic. Simple tests are performed on a daily basis, whilst more sophisticated tests are conducted on a quarterly, half yearly or annual basis. Responsibility for testing will be shared between the 'User' and a designated 'Test Person' (TP). The definition of these two individuals may be found on Autoclave Advice Sheet 7. All testing should be preceded by a safety check to ensure the autoclave is both safe for use and for testing.

All test results should be recorded and retained in accordance with your local Primary Care Trust protocols.

Daily Tests

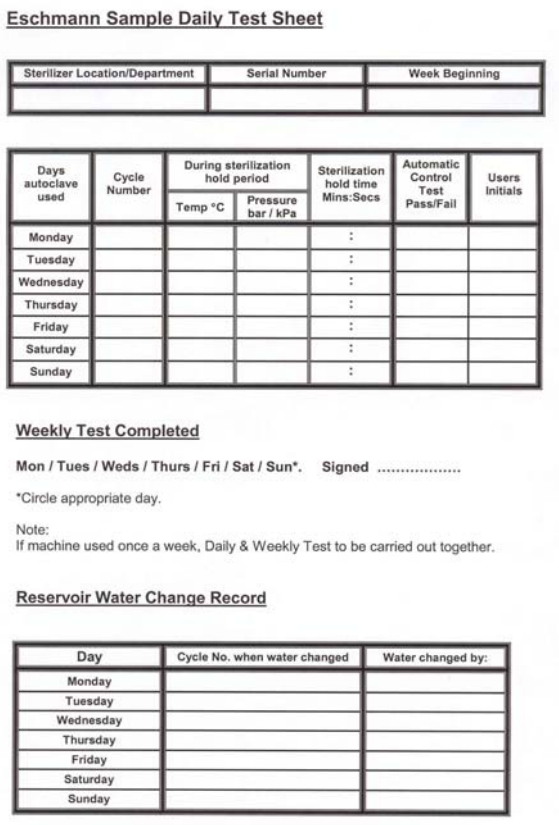
These are performed by the 'User' and consist of the following:

Automatic Control Test (ACT)

It is recommended this is carried out at the start of the day or before the autoclave is used for the first time that day.

Some autoclaves may require a warm up cycle prior to performing daily tests. Please check your autoclave's Instructions for Use to establish if a warm up cycle is required. 'Little Sister' and 'SES' autoclaves do not require a warm up cycle.

To perform the test the autoclave should be empty and the most frequently used cycle selected (e.g. 134°C, unwrapped without drying), or a test cycle if the autoclave is programmed with this feature. If the unit has a printer installed, the print out of the test cycle should be retained and recorded in a daily logbook for that autoclave.



Eschmann Sample Daily Test Sheet

Sterilizer Location/Department	Serial Number	Week Beginning

Days autoclave used	Cycle Number	During sterilization hold period		Sterilization hold time Mins:Secs	Automatic Control Test Pass/Fail	Users Initials
		Temp °C	Pressure bar / kPa			
Monday				:		
Tuesday				:		
Wednesday				:		
Thursday				:		
Friday				:		
Saturday				:		
Sunday				:		

Weekly Test Completed

Mon / Tues / Weds / Thurs / Fri / Sat / Sun*. Signed .....

*Circle appropriate day.

Note:
If machine used once a week, Daily & Weekly Test to be carried out together.

Reservoir Water Change Record

Day	Cycle No. when water changed	Water changed by:
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		

A sample logbook may be downloaded from the Eschmann website. www.eschmann.co.uk

If the autoclave does not have a printer, the following information must be observed and recorded manually.

- Cycle Time
- Sterilization 'hold time' (i.e. the length of time temperature is held at either 134°C or 121°C during the cycle)
- Temperature
- Pressure

Manual recording of test results can be time consuming. The use of a printer is highly recommended, as it provides the dual benefits of saving time and is assured of accurately recording the test results.

In addition to these tests, users of **vacuum autoclaves** should perform a daily steam penetration test. The purpose of the steam penetration test is to ensure sufficient steam is produced in order to penetrate complex loads (e.g. multi-wrapped items or materials). The most frequently used test method is a 'Bowie & Dick' Type. It is possible with some autoclaves to conduct both the steam penetration test and the automatic control test on the same cycle, please refer to the instructions for use supplied with the autoclave.

Note: Only use the steam penetration test designed for use with the autoclave you are using – Steam penetration test packs are not universal and use of the incorrect one may provide inaccurate and misleading results.

Weekly Tests

Weekly tests may be performed by the 'User' provided adequate training has been conducted and agreed by the Authorised Person otherwise testing must be performed by the Test Person.

The weekly test consists of the following safety checks:

- Examine the door seal for signs of deterioration and leaks.
- Check the security and performance of the door safety devices.
- Air leakage test (automatic)

This test is intended to check that air will not leak into the sterilizer during periods of vacuum, at a rate greater than specified by the manufacturer. Most autoclaves should be fitted with automatic leak detection function test, and this should indicated within the Instructions for Use.

Quarterly & Annual Testing

Should only be performed by a qualified Test Person (TP). The Test Person (TP) may be a suitably qualified service engineer, and tests may be performed as part of a service agreement. Any service agreement should clearly identify whether this routine testing is included as part of the contact and whether the person performing the test is sufficiently qualified.

SES Little Sister Benchtop Autoclave Advice Sheets

No 1	The Decontamination Cycle
No 2	Pre-sterilization Cleaning & Disinfection
No 3	Selecting A New Autoclave
No 4	Best Practice in Use of Benchtop Autoclaves
No 5	Autoclave Testing
No 6	Health Technical Memoranda
No 7	Frequently used terms

For copies of the above please contact
Eschmann Customer Service Tel: 01903 753322

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